

# Overall system:

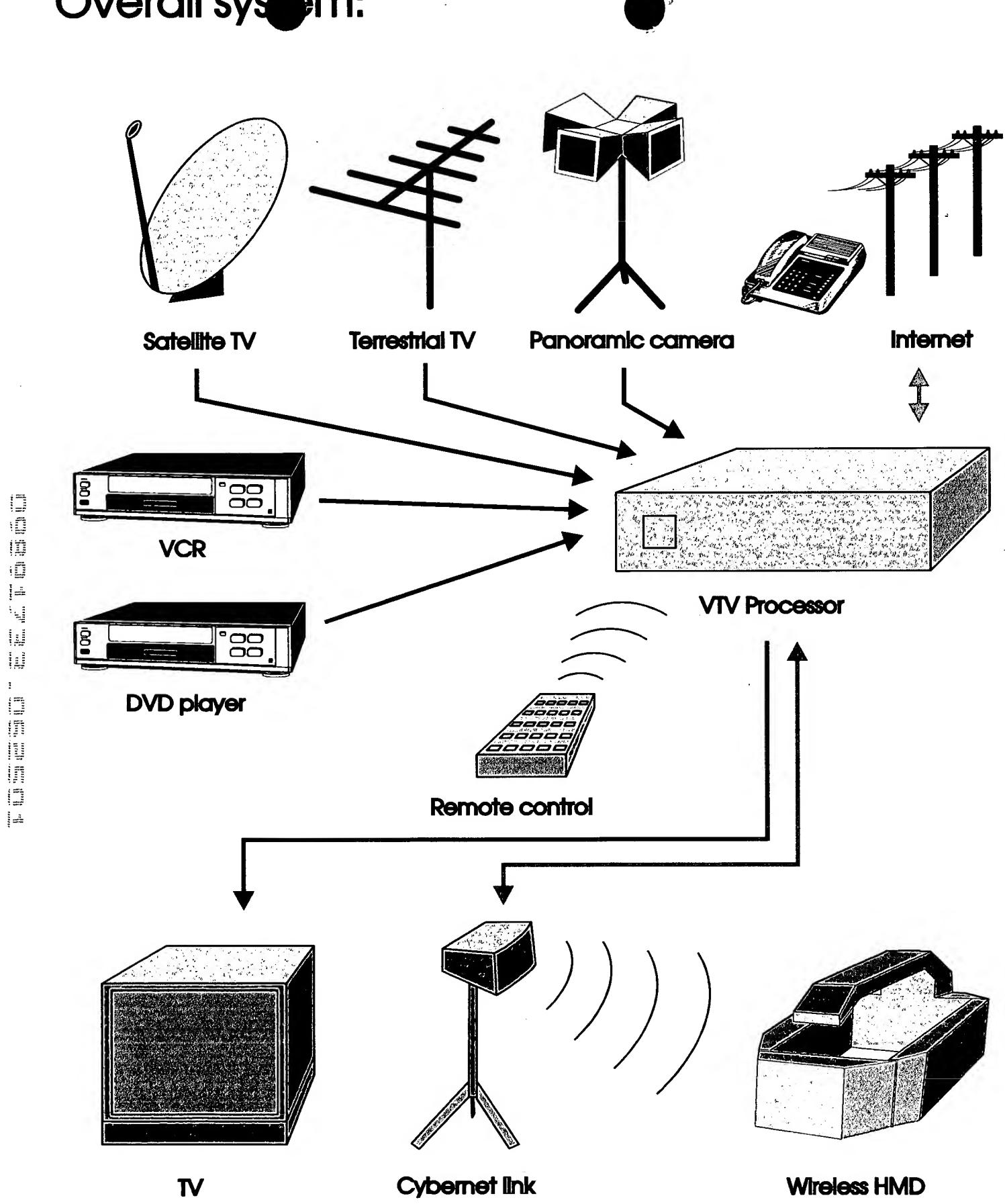


Fig. 1

# Basic configuration:

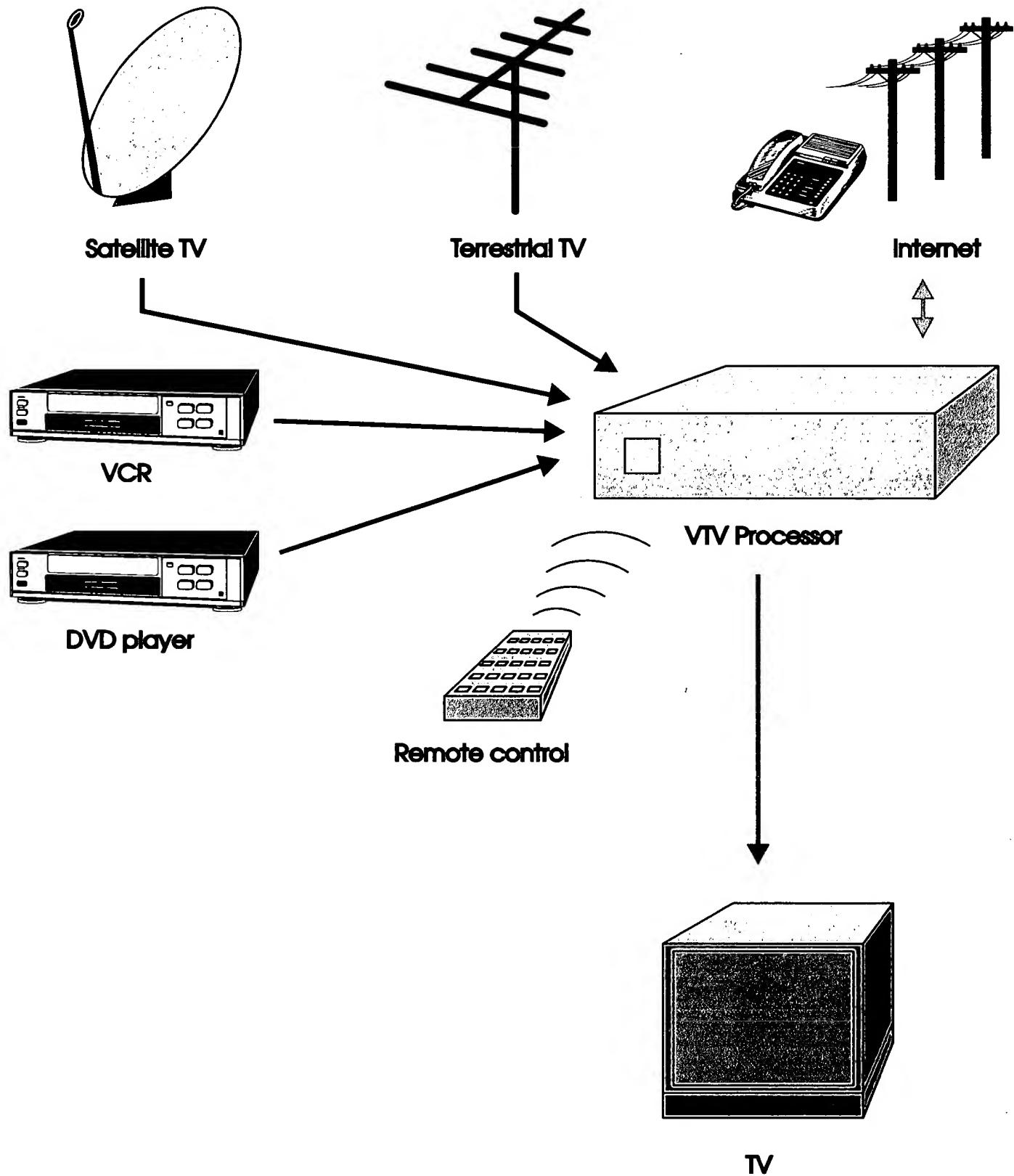


Fig. 2

## Advanced configuration:

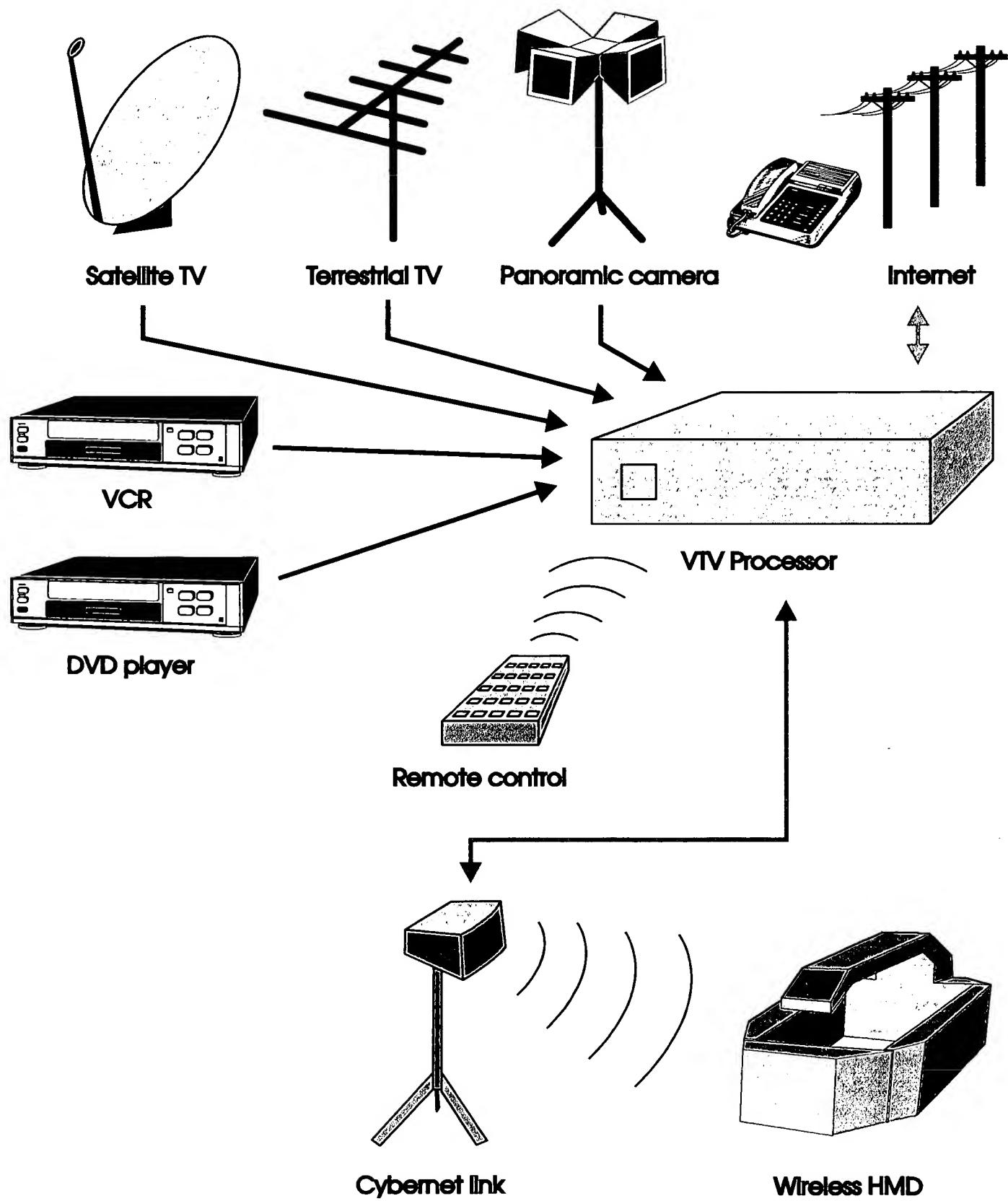


Fig. 3

## Display field:

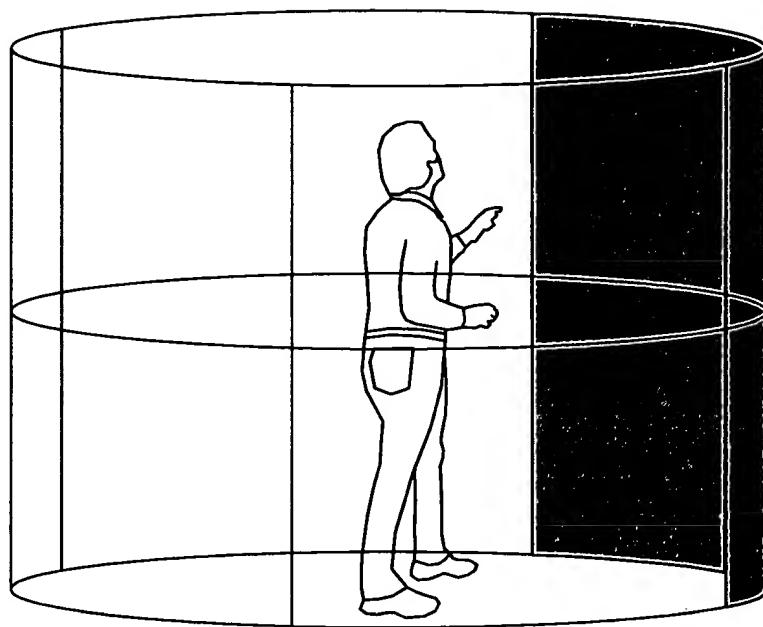
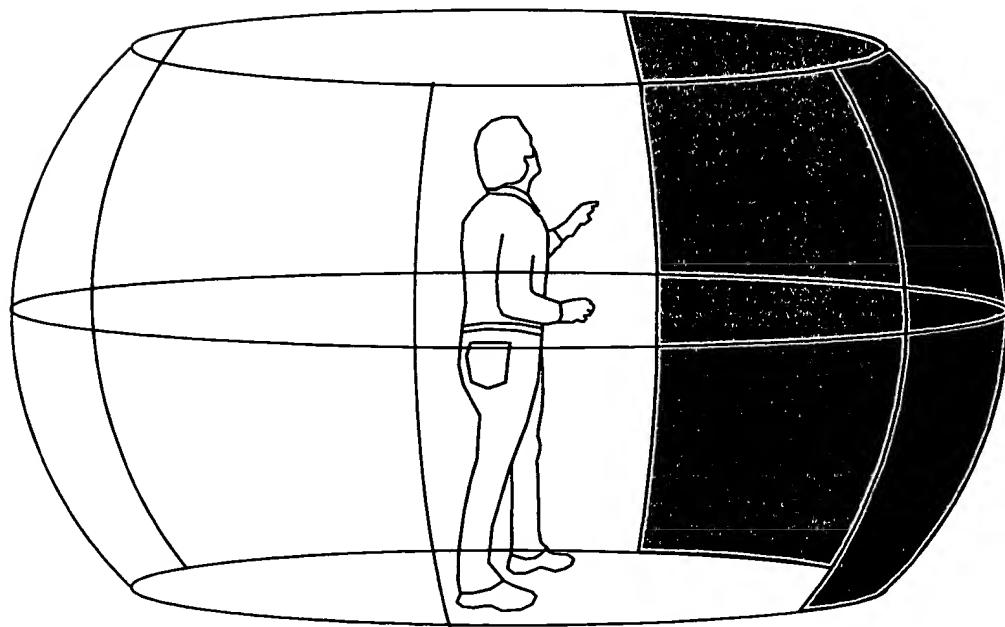


Fig. 4



**Fig. 5**

# Virtual sound:

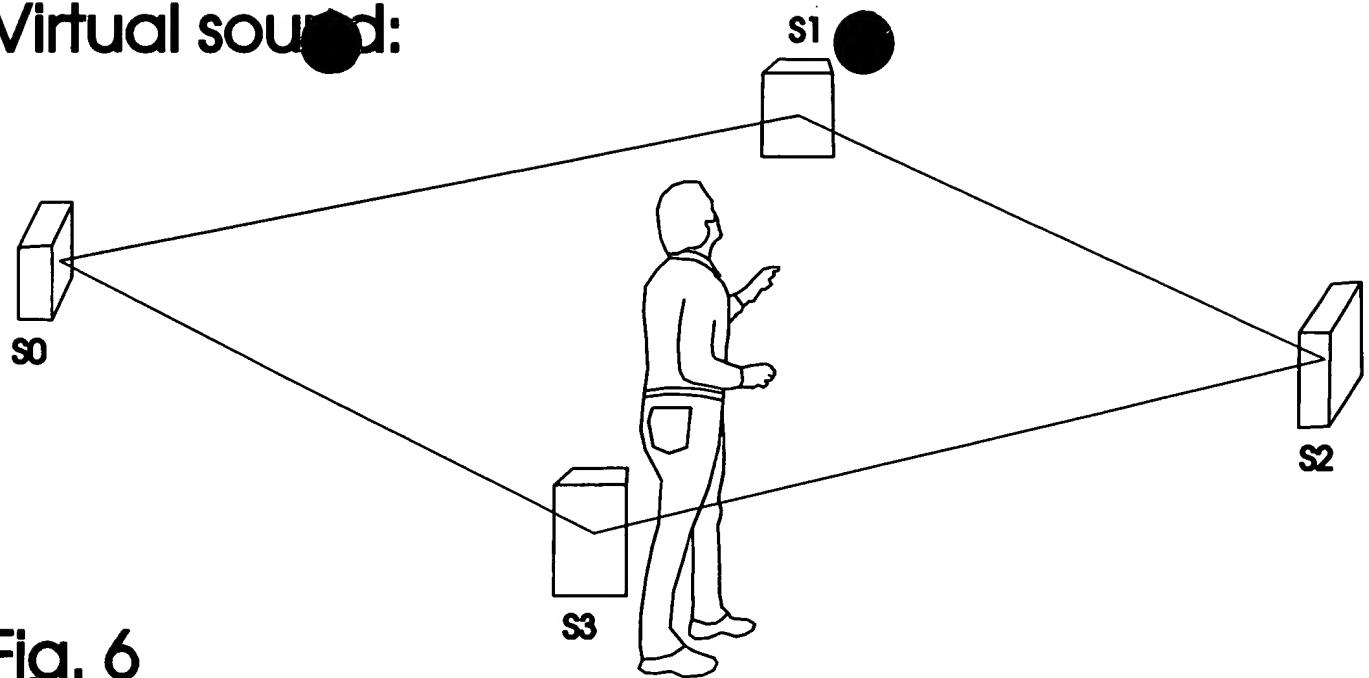


Fig. 6

Navigation icons: back, forward, search, etc.

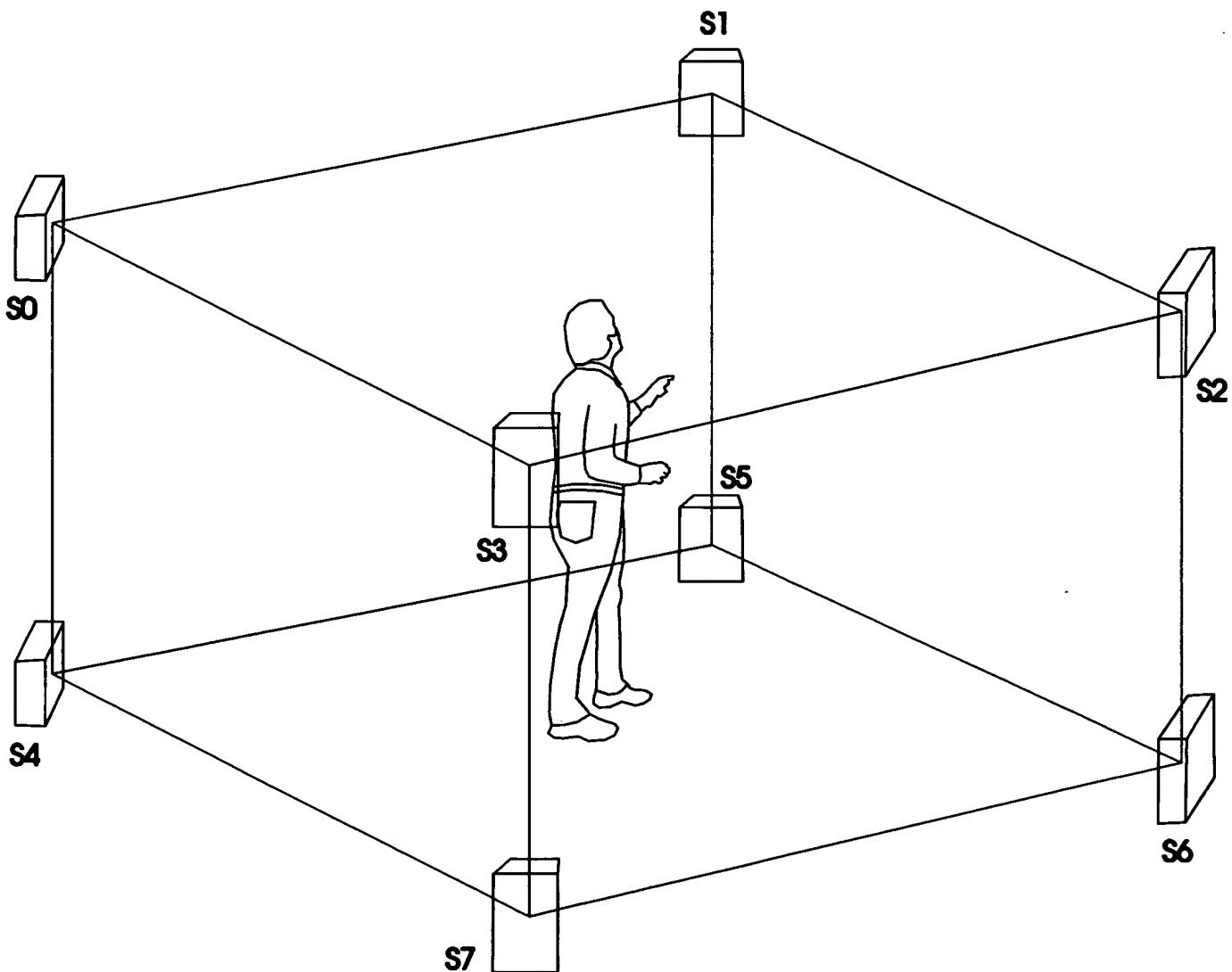


Fig. 7

# VTM memory map:

10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10

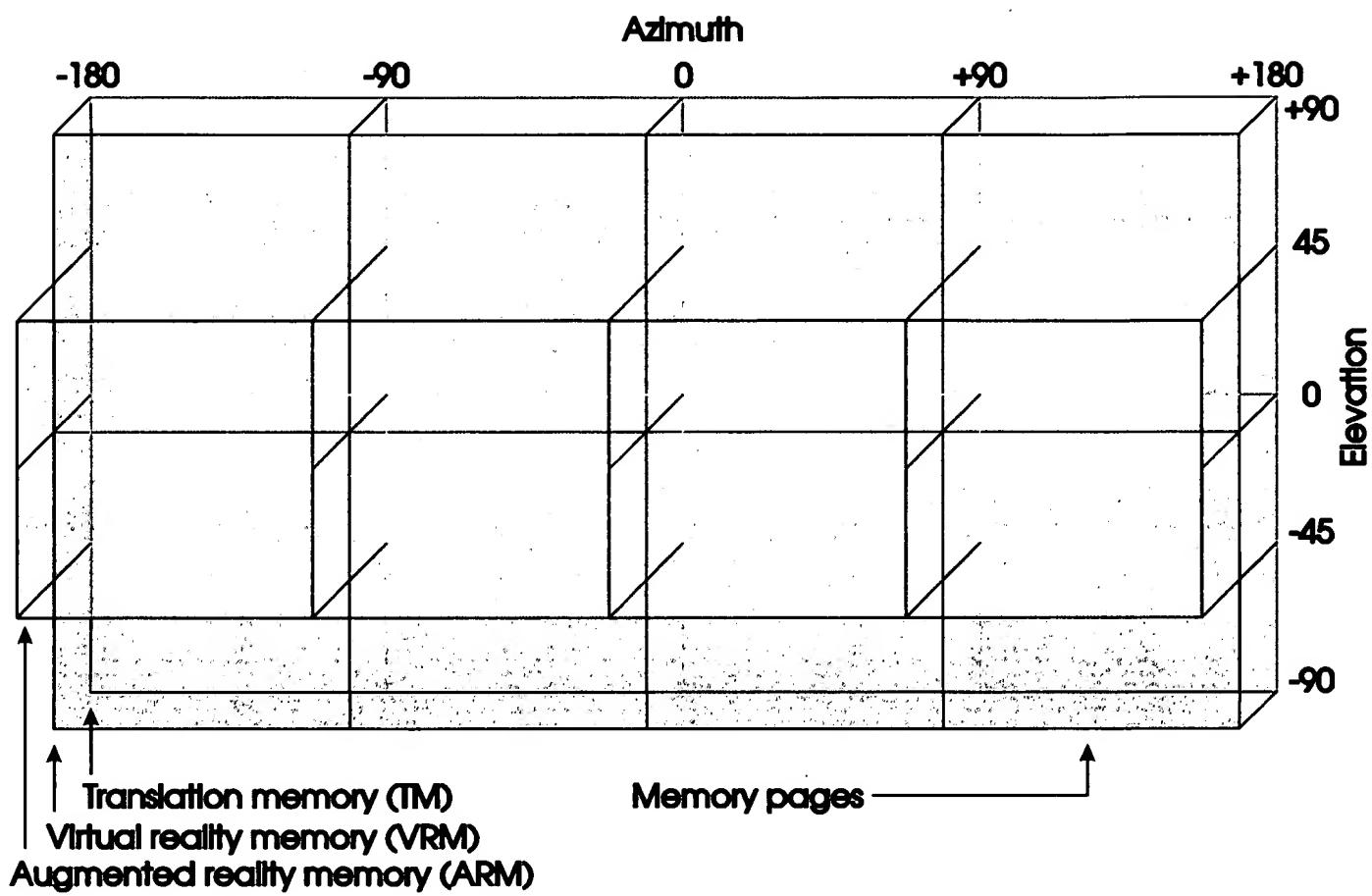


Fig. 8

# VTV graphics engine: (data write side)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

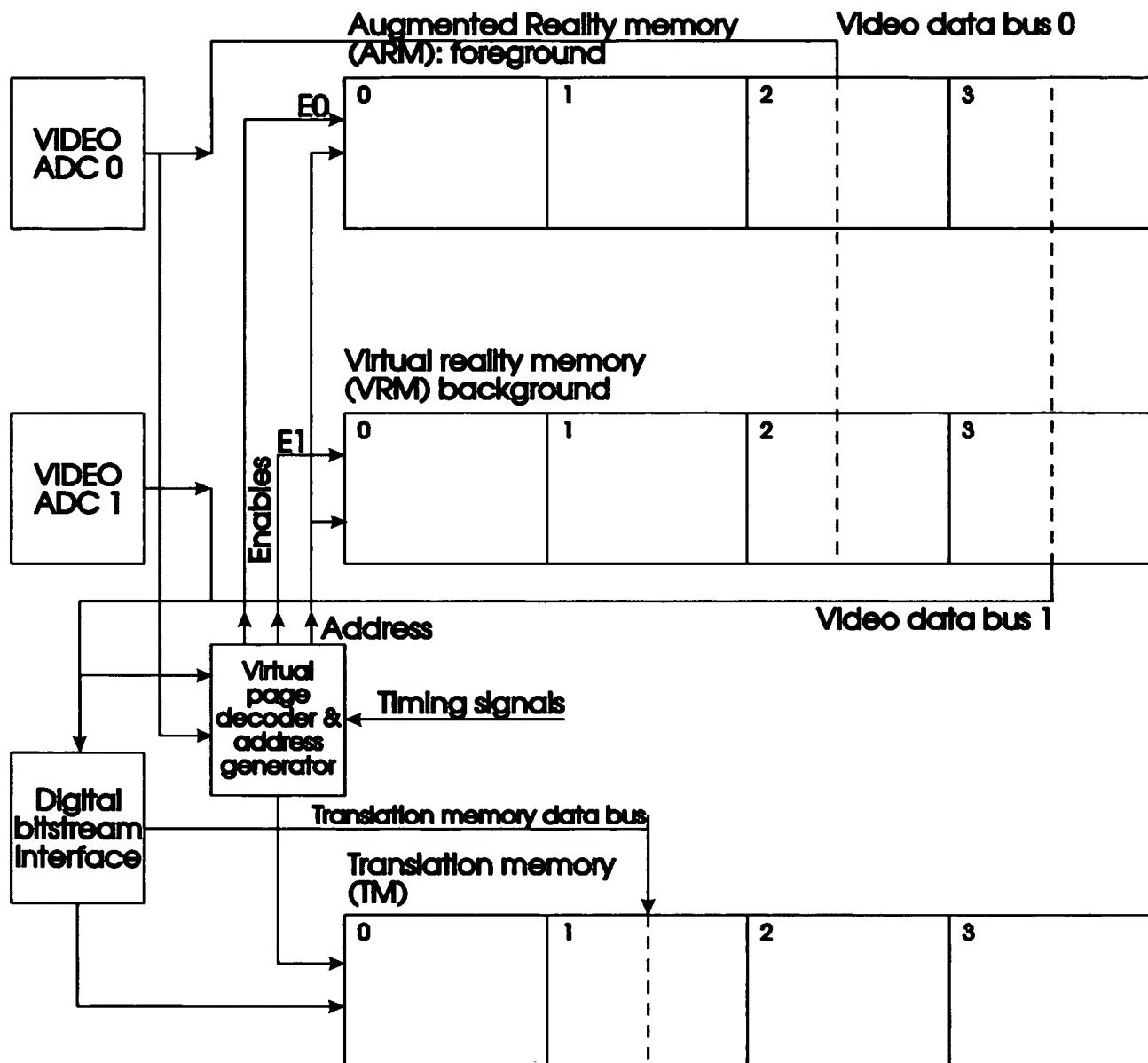


Fig. 9

# VTV graphics engine (data read side)

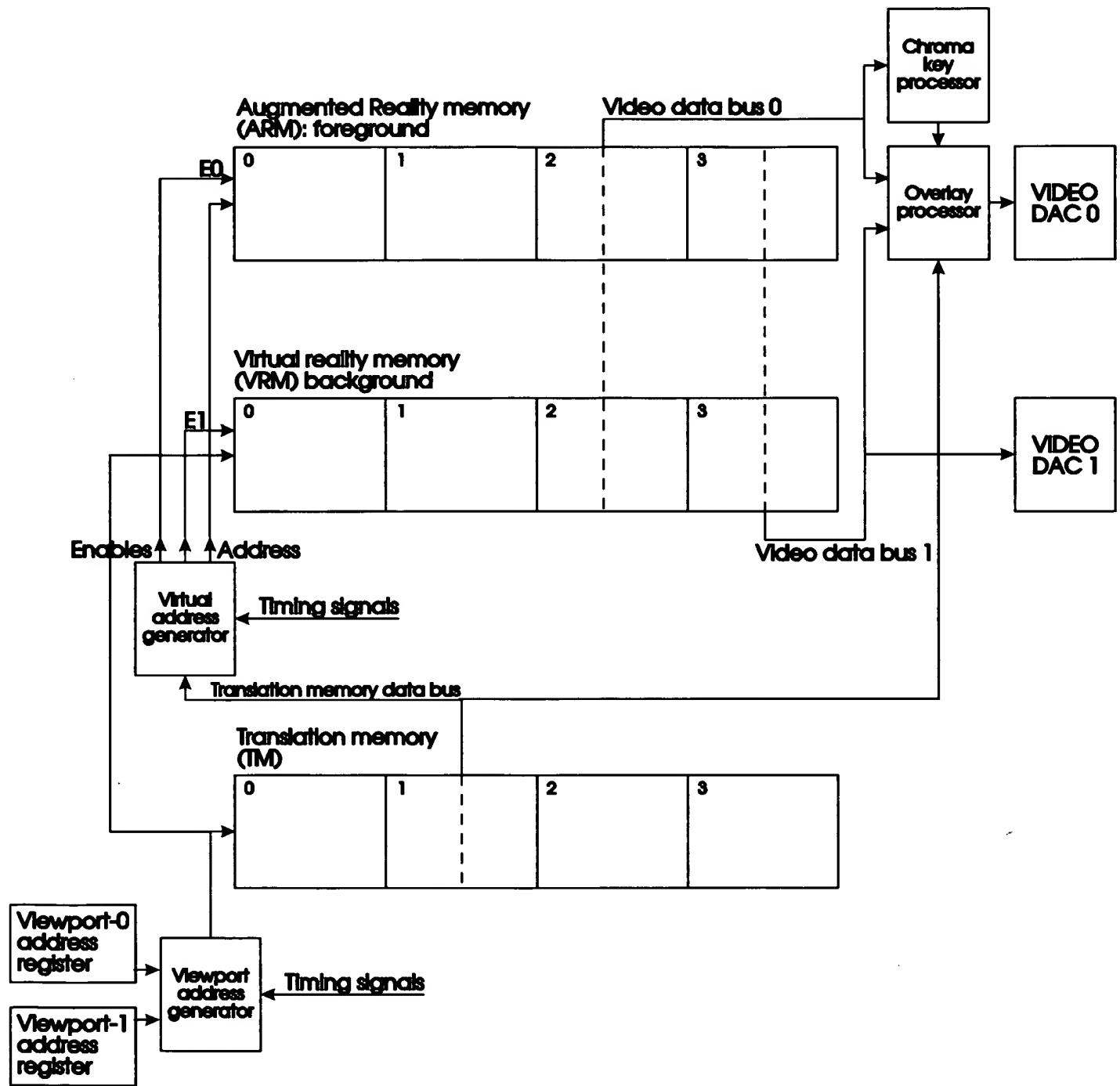


Fig. 10

# Analogue video compatibility:

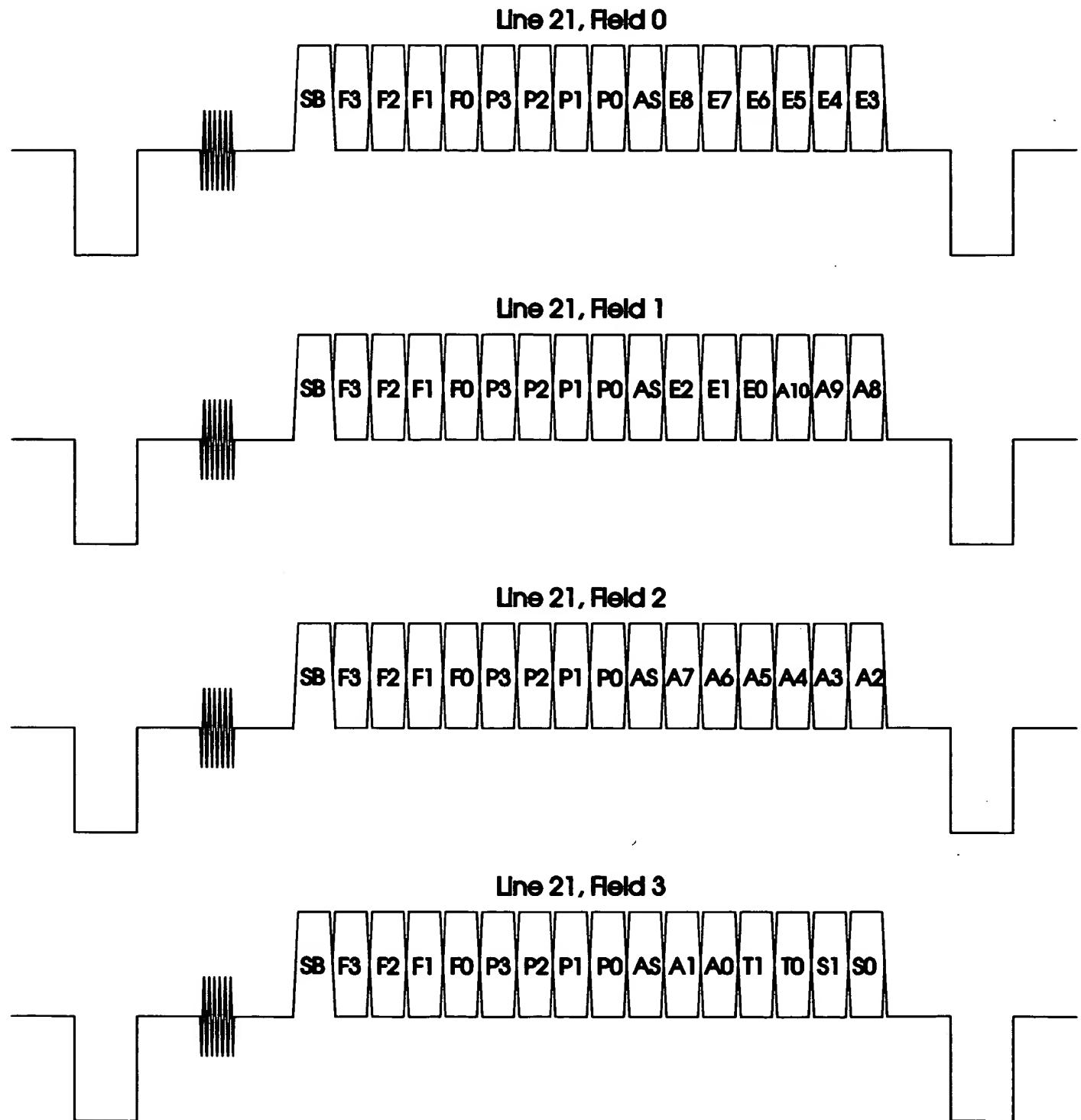


Fig. 11

| CONTROL FIELD        | BITS   | VALUE         | ASSIGNMENT KEY                |
|----------------------|--------|---------------|-------------------------------|
| FRAME FLIP           | FF     |               | FLIP MEMORY FRAMES            |
| FIELD TYPE           | F2-F0  | 0             | FOREGROUND VIDEO (ARM)        |
|                      |        | 1             | BACKGROUND VIDEO (VRM)        |
|                      |        | 2             | DIGITAL HYBRID (TM)           |
|                      |        | 3             | DIGITAL BIT STREAM FRAME (TM) |
|                      |        | 4             | RESERVED                      |
|                      |        | 5             | RESERVED                      |
|                      |        | 6             | RESERVED                      |
|                      |        | 7             | DIGITAL CONTROL FRAME         |
| PAGE NUMBER          | P3-P0  | 0-15          | (DEPENDANT UPON MEM LAYOUT)   |
| AUDIO SYNC           | AS     |               | RESET AUDIO BUFFER TO ZERO    |
| ELEVATION CORRECTION | E8-E0  | (+/- 45 DEG)  | CAMERA ELEVATION              |
| AZIMUTH CORRECTION   | A10-A0 | (+/- 180 DEG) | CAMERA AZIMUTH                |
| AUDIO TRACKS         | T1-T0  | 0             | NO AUDIO TRACKS               |
|                      |        | 1             | 4 AUDIO TRACKS                |
|                      |        | 2             | 8 AUDIO TRACKS                |
|                      |        | 3             | OBJECT BASED AUDIO            |
| AUDIO SAMPLE RATE    | S1-S0  | 0             | 2/4 LINES (15K S/S)           |
|                      |        | 1             | 3/6 LINES (23K S/S)           |
|                      |        | 2             | 4/8 LINES (31k S/S)           |
|                      |        | 3             | 5/10 LINES (38K S/S)          |

TABLE 1

# Analogue video compatibility: (8 channel, low sample rate example)

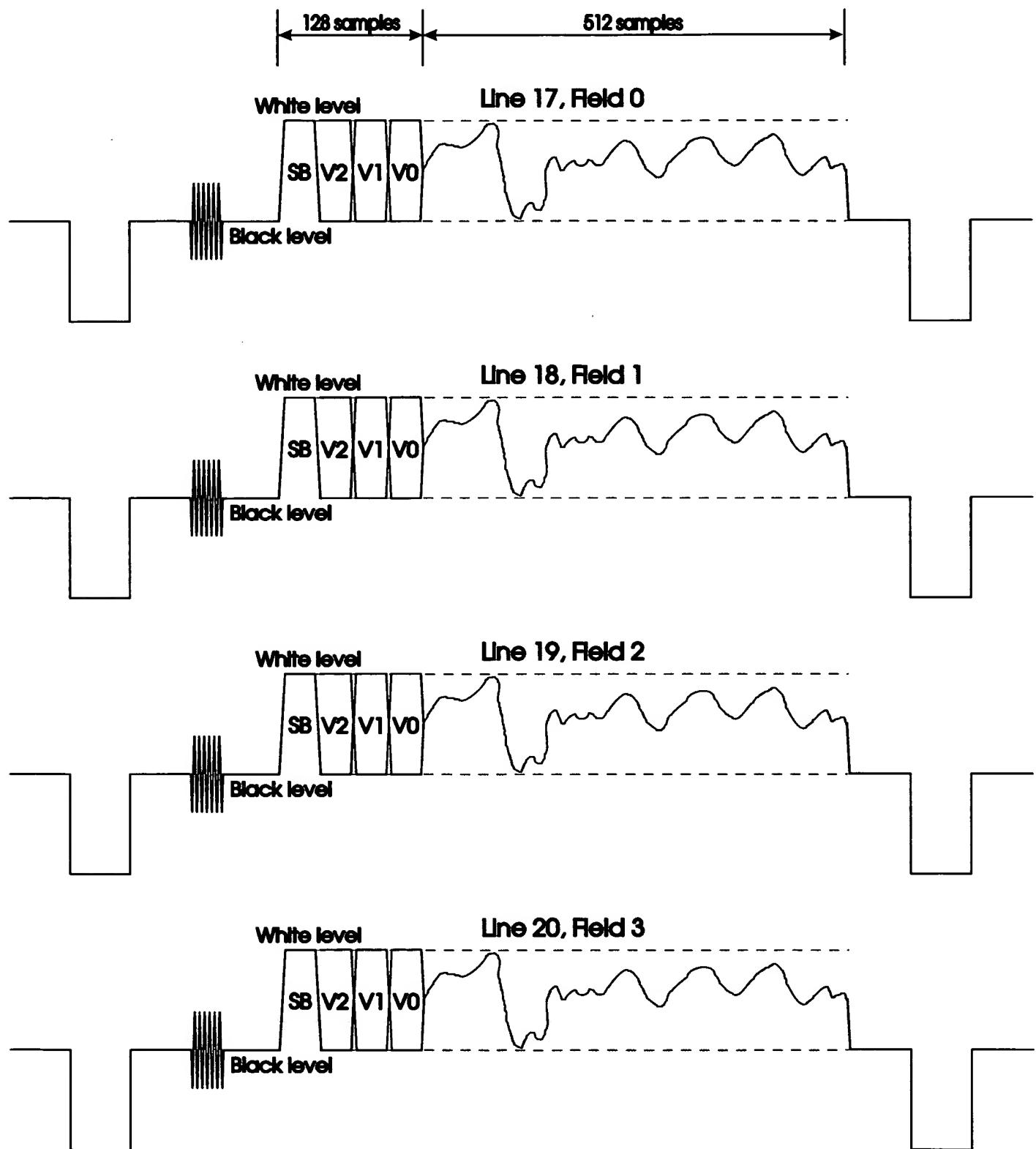


Fig. 12

# Optical tracking system:

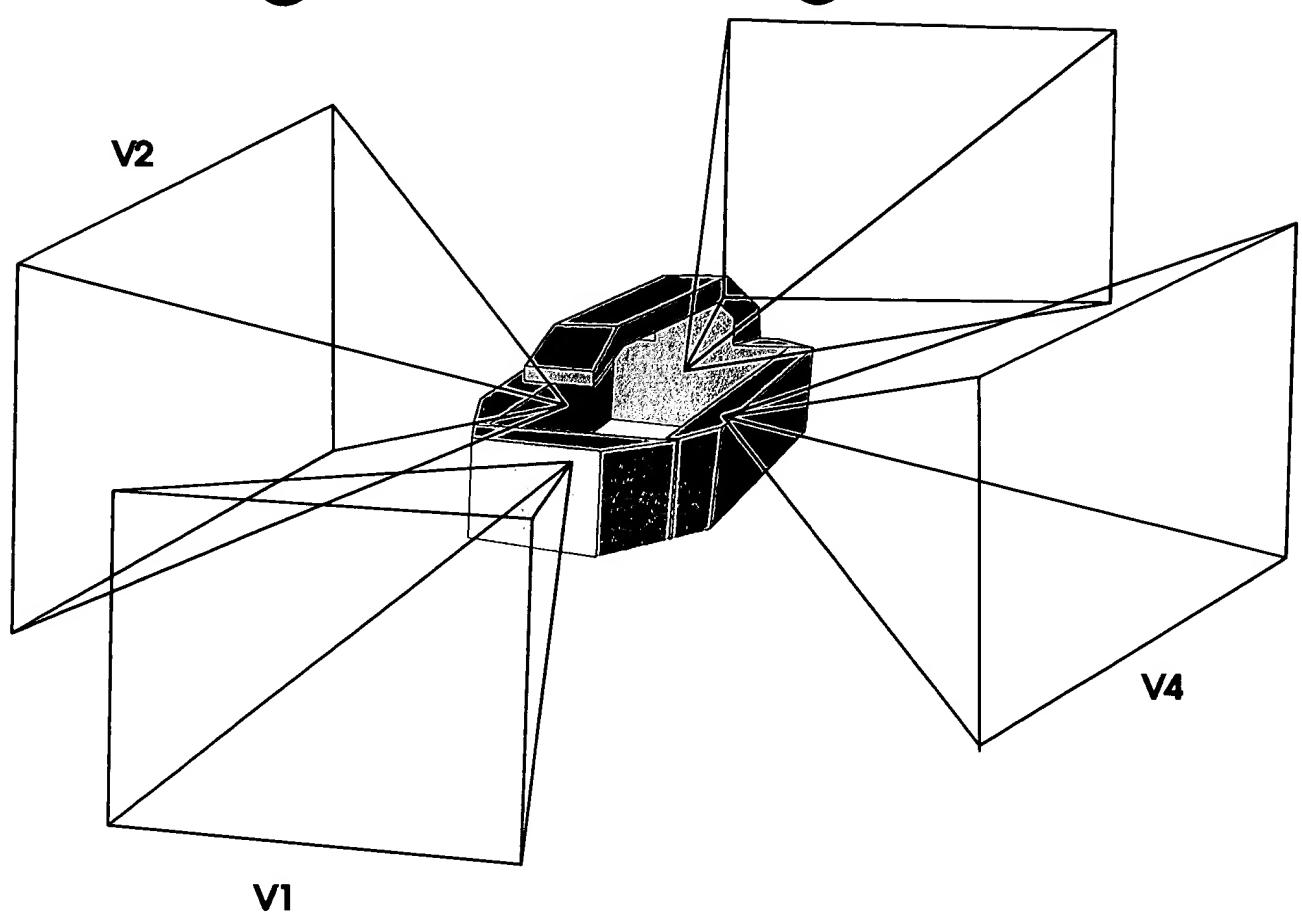


Fig. 13

Azimuth:

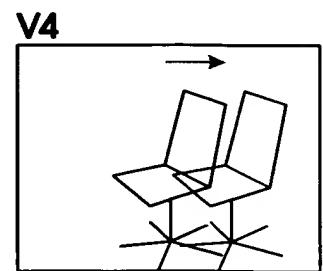
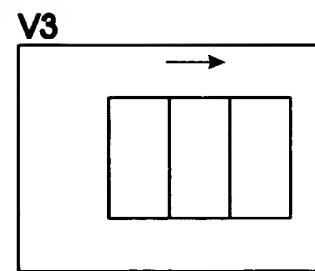
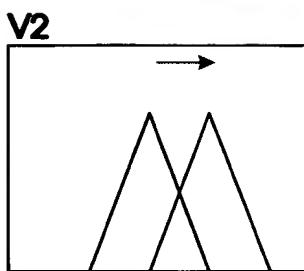
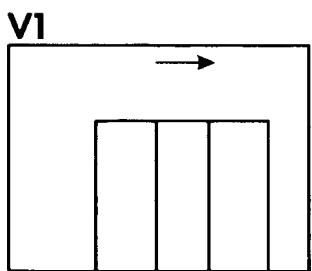
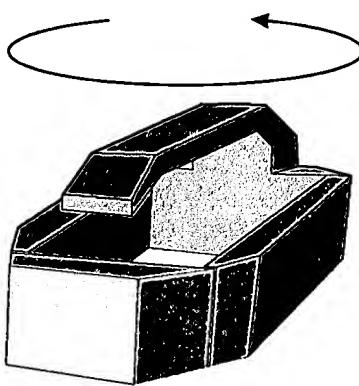


Fig. 14

## Elevation:

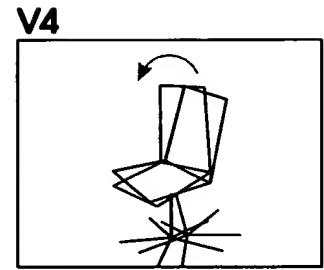
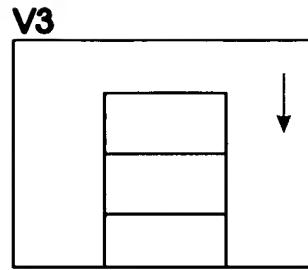
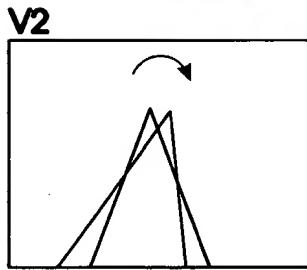
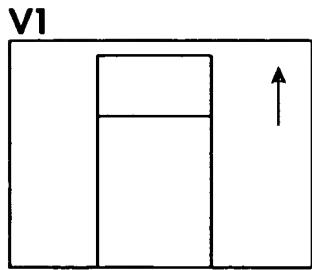
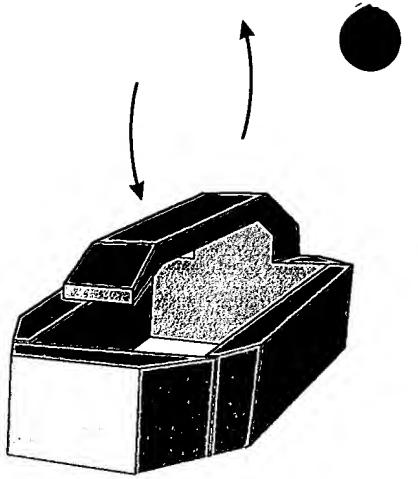


Fig. 15

## Roll:

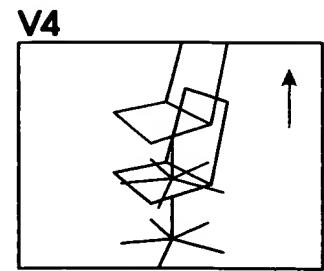
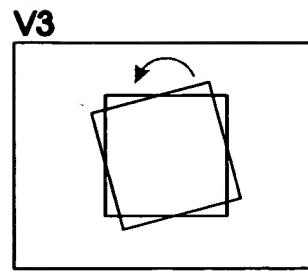
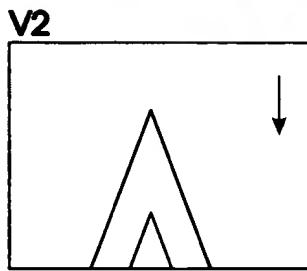
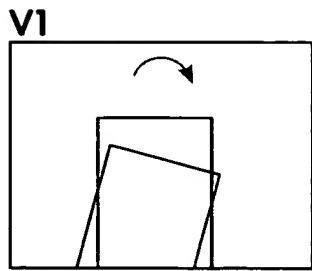
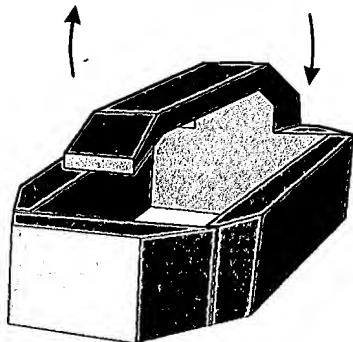


Fig. 16

## Forwards/Backwards:

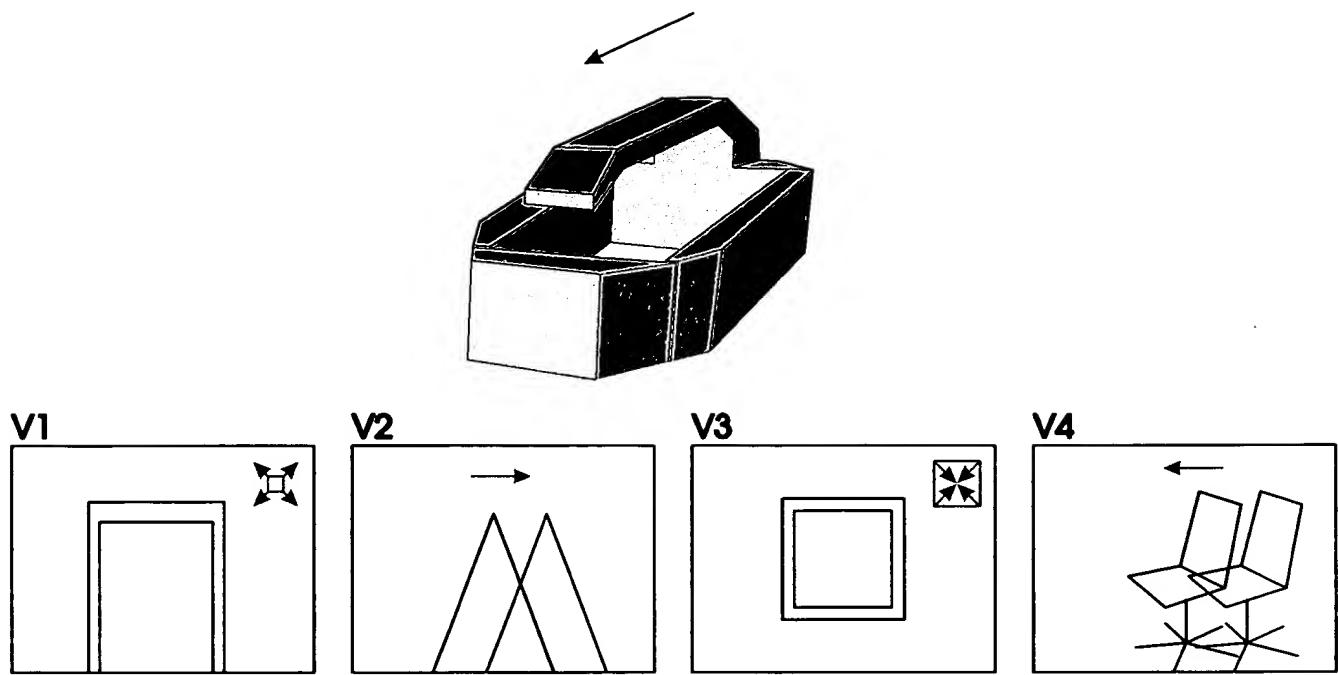


Fig. 17

## Left/Right:

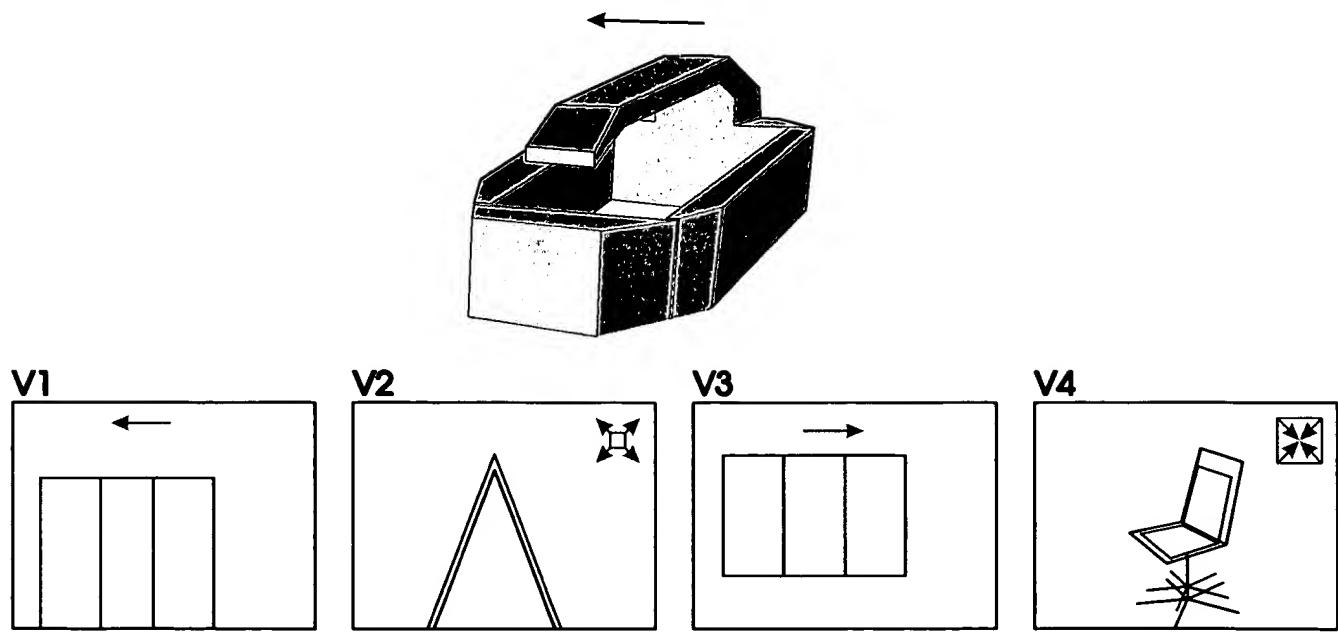


Fig. 18

Up/Down: ●

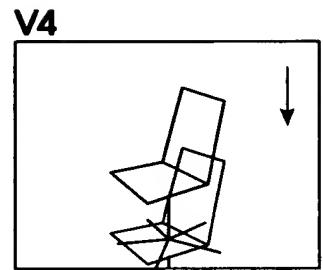
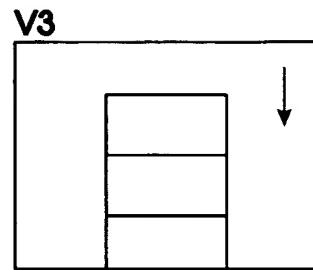
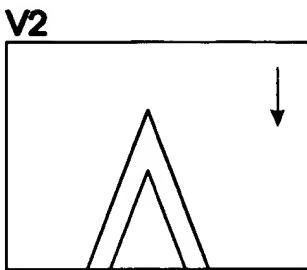
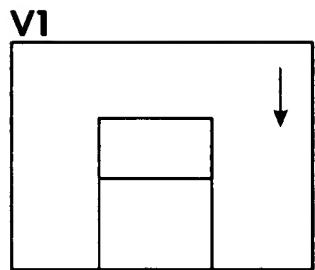
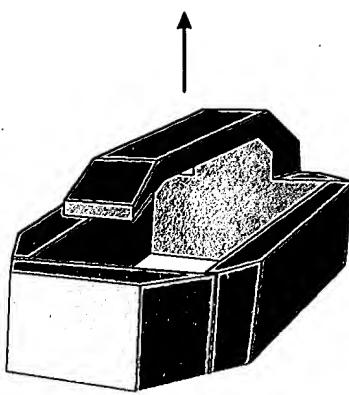


Fig. 19

# Optical tracking hardware: ● (simplified system)

Navigation

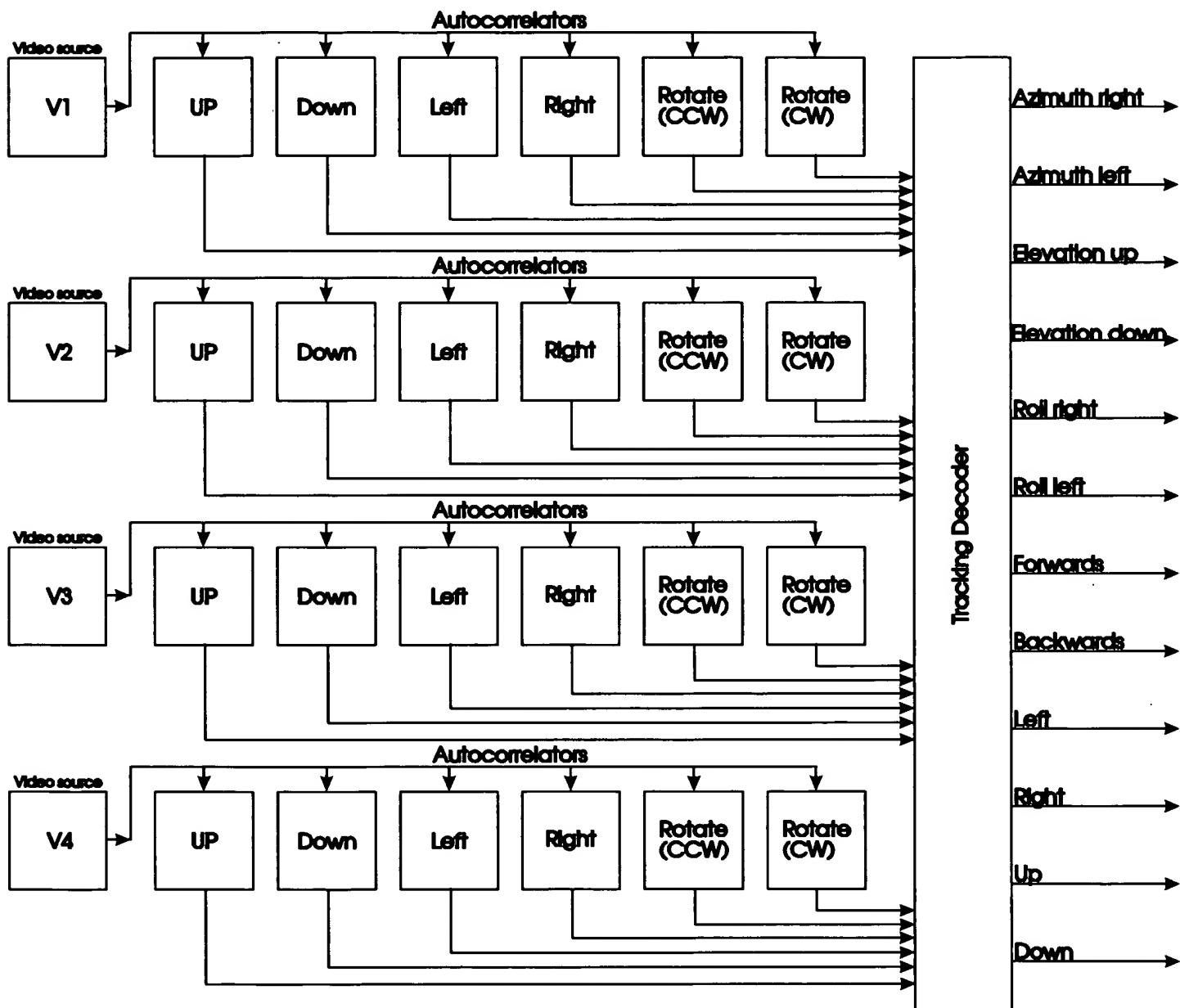


Fig. 20